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ABSTRACT

This document is the second in a series of reports that measures progress to-date in making New Jersey's school finance system fairer to students and taxpayers alike. It examines change in the distribution of revenues and expenditures between 1975-76 and 1978-79, the equity of these distributions, how budget caps influenced these shifts, and the relationship between expenditures and the distribution of educational resources. These issues are examined in light of the negligible effect of the Public School Education Act of 1975. This act, the report states, was designed to meet the New Jersey Supreme Court's objections in Robinson v. Cahill that heavy reliance on local property taxes to pay for education was not producing the constitutionally mandated, thorough and efficient education for students. Several tables are included throughout the report. The appendices offer an explanation of methodology used and how the state aid formula operates. (Author/LD)

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money and education

HOW FAR HAVE WE COME?

FINANCING NEW JERSEY EDUCATION IN 1979

by
Margaret E. Goertz

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TABLE OF CONTENTS

	Page
PREFACE	iii
HOW FAR HAVE WE COME?	1
What We Found	2
How Far Must We Go?	7
LOOKING FOR EQUITY	9
How Equitable is the System?	10
Narrowing the Gap in Expenditures	10
Relating Educational Resources to Educational Need	14
Achieving "Fiscal Neutrality"	16
Closing the Gap in School Tax Rates	22
How Far Have We Come?	26
EDUCATION BUDGET CAPS: CURSE OR CURE-ALL?	29
The Structure of Education Budget Caps	30
The Fiscal Impact of the Budget Caps, 1976-1978	32
Limitations to the Effectiveness of the Caps	39
WHAT DOES THE MONEY BUY?	43
Where Did the New Aid Dollars Go?	43
What Does Money Buy?	48
HOW FAR MUST WE GO?	53
APPENDIX A: GLOSSARY	A-1
APPENDIX B: METHODOLOGY	B-1
APPENDIX C: HOW THE FORMULA OPERATES	C-1
APPENDIX D: SUPPLEMENTAL TABLES	D-1
APPENDIX E: SUPPORTING DATA FOR FIGURES 1 AND 2	E-1

PREFACE

"Money and Education: How Far Have We Come?" is the second in a series of reports by the Education Policy Research Institute of Educational Testing Service which looks at selected issues in New Jersey school finance. The first report, "Money and Education: Where Did the 400 Million Dollars Go?" measured the extent to which the Public School Education Act of 1975, in its second year of operation, changed the way education revenues are raised and distributed in New Jersey. This second report updates the evaluation of how education funds are raised and distributed to include the 1978-79 school year, examines the impact of budget caps on these distributions, and presents a preliminary analysis of how education dollars are spent.

I am indebted to several individuals and organizations for their assistance in preparing this report. Jay Moskowitz provided valuable input into the design of the research; May Leung patiently updated our extensive New Jersey data base and generated the computer reports which underlie this analysis; Judy Dollenmayer supplied editorial assistance; Irma Kienitz typed the manuscript; and Christine Sansone and Faith Thompson of Research Text Processing produced the finished product. Personnel in the New Jersey Department of Education, New Jersey Department of Community Affairs, and the New Jersey Education Association opened their data files to us and answered our endless questions. Our analysis of the budget cap legislation expanded on the methodology developed by Ernest Reock in his reports to the Joint Committee on Public Schools. Finally, financial support for our research and for the publication of this report was provided through a grant from the Ford Foundation.

This study is issued at a time when citizens, educators, and legislators are questioning the success of New Jersey's education finance system. It is hoped that the analysis contained within this report will stimulate informed discussion of better ways to provide our children with a "thorough and efficient" educational program and an equitable school finance system.

Margaret E. Goertz

HOW FAR HAVE WE COME?

Six years have passed since the Robinson v. Cahill decision of the New Jersey Supreme Court ordered the state to develop a school finance plan that would assure every New Jersey child an education to equip him "for his role as a citizen and as a competitor in the labor market."[1] Three years have passed since the Public School Education Act of 1975, designed to define, implement and fund 'thorough and efficient" education, went into effect.

The Act has been controversial from the start. Some critics claim it has done little to improve education in the state; others argue, more severely, that it is destroying whatever quality education now exists. The legislature acted last fall to prevent further growth in the level of state support for elementary and secondary education, while the governor attacked the existing system and asked revisions in almost every aspect of school operations, including the state formula.

This report measures how far we have come in making New Jersey's school finance system fairer and determines how far we have to go in reaching this goal. Specifically, we examine (1) change in the distribution of school revenues and expenditures between 1975-76 and 1978-79, and the equity of these distributions; (2) how budget caps influenced these shifts; and (3) the relationship between expenditures and the distribution of educational resources. We also raise issues that will confront citizens and policymakers in their ongoing attempts to give New Jersey's children a "thorough and efficient" educational program within an equitable school finance system.

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[1] Robinson v. Cahill, 303 A. 2d 297 (1973).

What We Found

- In spite of the new law, New Jersey still has a two-tiered system of school finance. State aid has enabled districts at or below the state average valuation (which educate about 55 percent of the state's students) to spend roughly the same dollars on their students. However, districts that educate the remaining 45 percent of New Jersey students can still raise significantly more money from their local tax bases.

The new law was designed to meet the Court's objections that heavy reliance on local property taxes to pay for education was not producing the constitutionally mandated "thorough and efficient" education for students. Three years later, the state has increased its share of total expenditures from 23.5 percent to 31.3 percent;[2] support from local property taxes has dropped accordingly, from 71.4 percent to 61.0 percent.

The aid program was supposed to overcome differences in expenditures due to disparities in property wealth. As Figure 1 suggests, however, the general effect of the new law has been nearly negligible. In spite of substantial growth in state aid, property wealth remains the primary factor determining the level of educational expenditures in New Jersey. This is so partly because of uneven growth in property valuations across the state. In the last three years, the average per pupil valuations in the poorest districts increased 15 percent, while those in the wealthiest ones rose nearly 40 percent. As a result, the state has been running hard just to stay in place.

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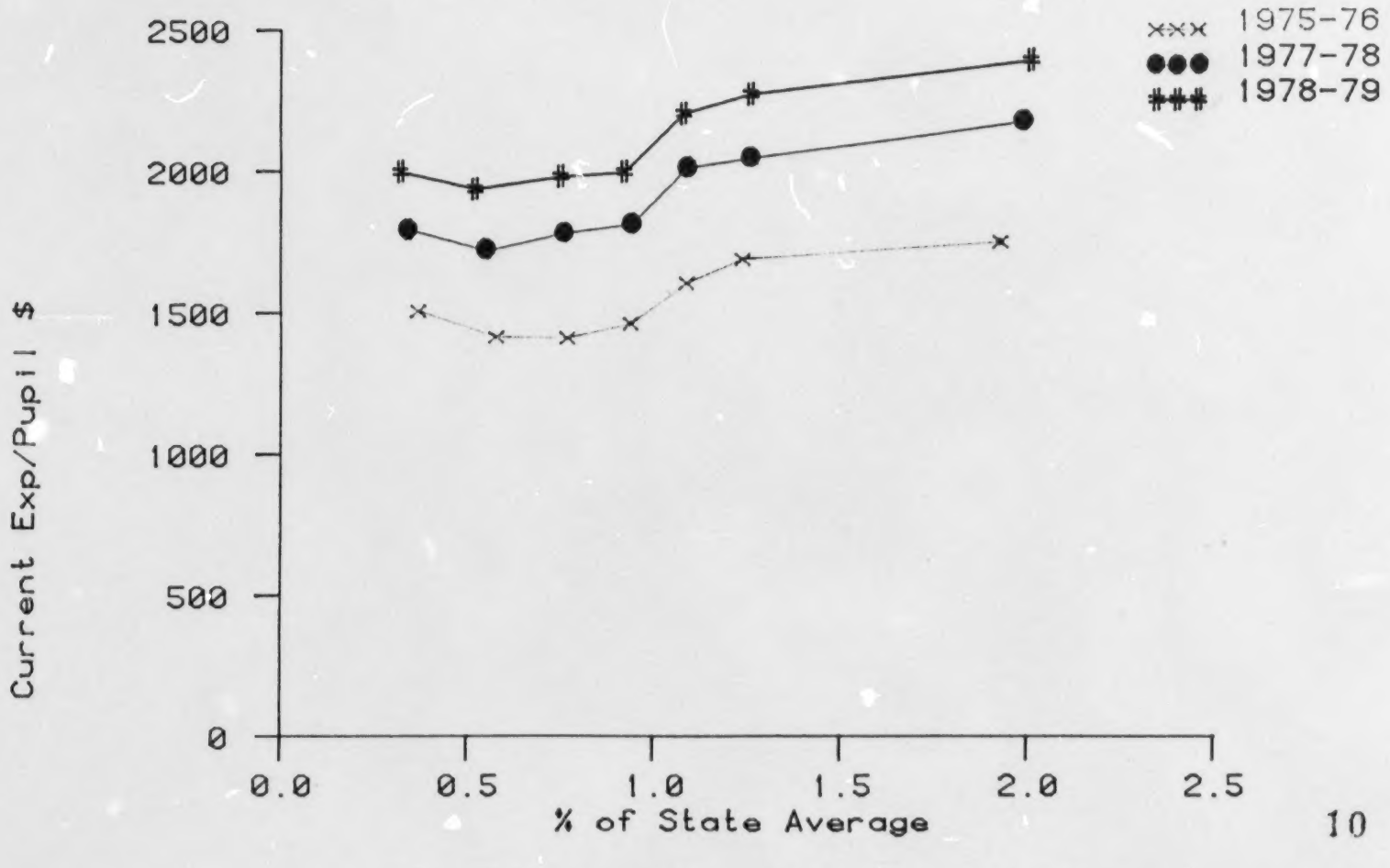
[2] The figures for total expenditures do not include federal Elementary and Secondary Education Act aid; figures for state aid do not include the state's contribution to the Teacher Pension and Annuity Fund.

Figure 1

Relationship between Property Wealth and Current Expenditures per Pupil, 1975-76 to 1978-79



- Between 1975-76 and 1978-79, the ratio in expenditures between high- and low-spending districts narrowed slightly (from 1.77 to 1.65). But the absolute difference in current expenditures between them grew. The gap between districts spending at the high 95th percentile and the low 5th percentile increased from $900 to $1080 per pupil.

Differences among districts in educational needs are not considered by this measure of their spending. A district with more students who need special services due to physical or mental handicaps, bilingualism, or poverty backgrounds, may need to spend more money per pupil than a district with few such students. When New Jersey's school districts are grouped according to educational need, we find that high-need districts spent at a level equal to 98 percent of the state average in 1975-76, but at a level equal to only 93 percent of the state average three years later. That is, under the new law, educationally needy districts seem somewhat less able to meet their programmatic demands.

The law has succeeded in equalizing school tax rates across all but the wealthiest districts in the state. Due to unequal growth in property values, however, low-wealth districts are once again raising their school tax rates, while the rates in wealthier districts have stabilized or continued to drop.

- After three years of operation, New Jersey's education budget caps have forced tax relief in those districts receiving large increases in state aid and stabilized tax rates for other groups of districts. They have failed, however, to significantly narrow expenditure disparities.

Two factors kept the caps from making expenditures more similar: (a) the ability of high-spending districts to exceed the caps constraints by using waivers, appropriating surpluses, or experiencing higher-than-average enrollment declines; and (b) the unwillingness or inability of low-spending districts to spend up to their budget caps.

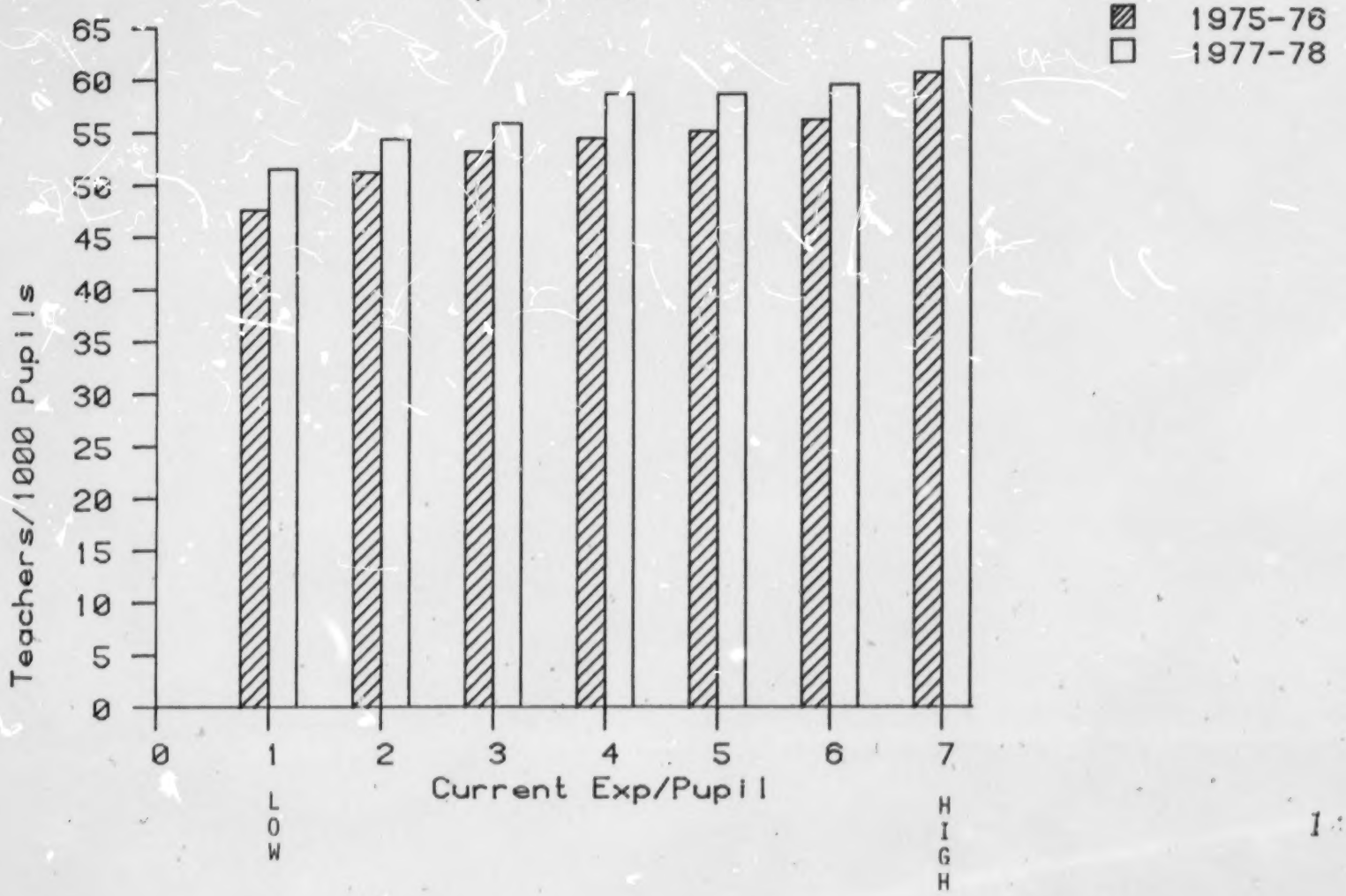
The cumulative effect of waivers, surpluses and enrollment declines enables high expenditure districts to spend considerably more per-pupil than their budget caps seem to allow. Such districts were free this year to exceed their per-pupil caps by an average of 113 percent. Low-spending districts struggled even to meet their capped budgets, however. Low-spending districts in New Jersey are predominantly low-wealth districts; slowly growing tax bases and a year's lag in the payment of equalization aid have prevented these communities from rapidly increasing their expenditures.

- These continuing disparities in per-pupil expenditures have resulted in different levels of educational services across the state.

A direct relationship exists between the level of educational expenditures and the number and experience of classroom teachers in a district. As shown in Figure 2, in 1977-78, the highest spending school districts had an average of 64 classroom teachers per 1000 pupils, or nearly 25 percent more staff than the lowest spending districts. Staff in the higher spending districts were also more experienced (12.3 years vs. 9.9 years in the lower spending districts), and on the average their salaries were higher.

Figure 2

Relationship between Distribution of Teachers and Current Expenditures per Pupil, 1975-76 and 1977-78



- Districts whose state aid rose substantially under the new formula used the money to provide more teachers per-pupil, not to raise salaries unreasonably.

In those districts where increases in state aid exceeded 25 percent of their 1975 budgets, only 15 percent of the new money went on average to tax relief. The number of classroom teachers rose 5.6 percent, and this rise, coupled with a 5 percent decline in enrollments, resulted in a substantial increase in the teacher/pupil ratio. Finally, teachers received raises lower than the statewide average (11.8 percent versus 13.2 percent).

How Far Must We Go?

Several problems continue to plague school finance in New Jersey. We found these most significant:

- The current level of state aid is too low to overcome existing expenditure disparities linked to wealth.
- The widening gap in per-pupil property valuations will make the goal of equity more expensive with every passing year.
- The concentration of pupils with extraordinary educational needs in low-wealth districts means that wealthier districts are able to offer much fuller services.
- New Jersey's cities face both stagnant tax bases for education, and increased demands for non-educational services to be bought by the same limited resources.

- The uneven distribution of declining enrollments has kept open the interdistrict gap in per-pupil expenditures.

While it is not our purpose to present an alternative school finance program, we offer some suggestions for future policy that stem from the findings above:

- The legislature should not fix the level of state support for public elementary and secondary education at its current level because the current aid is not overcoming disparities, and flexibility may be required.

- The measure of district "effort" in the existing formula should be adjusted to account for "municipal overburden."

- State aid for students with special educational need should reflect the real concentration of that need in districts, variations in the costs of special services, and the relative ability of districts to raise additional funds.

- The state should develop a policy to meet the fiscal and educational effects of declining enrollments.

The rest of this report documents our findings and discusses in more detail the issues involved in making New Jersey school finance more equitable. Since school finance has a language of its own, we have prepared a Glossary (Appendix A) of basic school finance concepts, and terms peculiar to New Jersey. For readers interested in the mechanics of the analysis or of the school finance formula, Appendix B describes our methodology and Appendix C shows how the funding formula operates.

CHAPTER I

LOOKING FOR EQUITY

On April 3, 1973, the New Jersey Supreme Court in Robinson v. Cahill ordered the legislature to replace the existing system of financing public elementary and secondary education, a system the Court characterized as a "patchy product reflecting provincial contests." The new school finance formula in the Public School Education Act of 1975 was designed to:

- guarantee that school districts of unequal property wealth would receive equal resources for equal tax rates;
- compensate districts for the extra costs of educating students with extraordinary educational need ; and
- narrow per-pupil expenditure disparities through a system of expenditure "caps."[1]

To what extent has the new school finance law led to a more equitable system of raising and distributing educational revenues in New Jersey? Have three years under the new law begun to remedy systematic inequities? Do a large proportion of school children live in districts with expenditures well above or below the state average? Does a strong relationship still exist among the wealth, expenditures and tax rates of local districts?

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[1] Under the expenditure caps, a district's expenditure level in a given year is limited to a percentage growth over the prior year's budget, a growth rate affected by the state's rising property valuations and the district's relative expenditure level. Districts spending less than the state average net current expense budget are allowed to increase their spending at a rate greater than those districts spending more than the state average. Chapter II offers an in-depth discussion of the education budget caps.

How Equitable is the System?

In our last report we used four criteria to assess the relative success of the Public School Education Act of 1975 in bringing greater equity to New Jersey. They were:

- Narrowing the gap among districts in expenditures per-pupil;
- Relating the level of educational resources to the level of educational need in a district;
- Guaranteeing that equal resources are produced by equal tax rates ("fiscal neutrality"); and
- Closing the gap in school tax rates among districts.

Narrowing the Gap in Expenditures

The Court was emphatic that the state constitution intended to insure equal educational opportunity for all children. Since, as the Court explained, "dollar input is plainly relevant and because we have been shown no other viable criterion for measuring compliance with the constitutional mandate,"[2] to judge equity gains from the new law, we must examine the relative per-pupil expenditure levels among districts in the state.

One measure of equity is how far the new school finance system reduces the gap between high-and low-spending districts. Since New Jersey contains tiny, atypical districts such as Teterboro (with several million dollars of property wealth and only one pupil) or Corbin City (which functions primarily as a special education district), we have narrowed our analysis to

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[2] Robinson v. Cahill, 303 A. 2d at 295.

the range in expenditures between the 95th and 5th percentiles. The closer expenditure differences are reduced to zero, the more equitable the system.

In 1975-76, when districts were ranked from low to high on current expenditures per-pupil,[3] children who lived in the district at the 95th percentile had $2062 per pupil spent on their schooling, an amount 1.77 times as large as that spent in the district at the 5th percentile, $1162.[4] The low expenditure district spent 75 percent of the state average; the district at the 95th percentile spent at 133 percent of the average.

By 1978-79, the range had narrowed slightly, but the absolute difference in current expenditures had increased from $900 to $1080 per pupil. As shown in Table 1, in 1978-79 the district at the 95th percentile spent $2742 per-child, or 1.65 times as much as the $1661 per-child spent by the district at the 5th percentile. The low-spending districts spent 79 percent of the state average and high-expenditure districts lowered their spending to 130 percent of the state average.

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[3] Current expenditures per-pupil, as used in this report, exclude expenditures on debt service and capital outlay, tuition revenues, and federal Elementary and Secondary Education Act aid. For more discussion of this definition, see Appendix B.

[4] These figures differ slightly from those in Margaret E. Goertz, Money and Education: Where Did the 400 Million Dollars Go? (Princeton, N. J.: Educational Testing Service, 1978) for two reasons: they reflect audited expenditure data and include adjustments for tuition payments received by the districts.

Table 1

Current Expenditures per-Pupil
5th and 95th Percentiles Compared to State Average

	1975-76	1977-78	1978-79
5th Percentile	$ 1162	$ 1444	$ 1661
95th Percentile	2062	2498	2742
Ratio of 95th Percentile to 5th Percentile	1.77	1.73	1.65
State Average	$ 1550	$ 1908	$ 2113
Ratio of 5th Percentile to Average	0.75:1	0.76:1	0.79:1
Ratio of 95th Percentile to Average	1.33:1	1.31:1	1.30:1

Source: New Jersey State Department of Education data compiled and analyzed by the Education Policy Research Institute, Educational Testing Service, Princeton, New Jersey.

These figures, however, do not consider variations in district expenditures caused by different levels of educational need. A district with more students who need special services may need to spend more per pupil to meet these educational needs. One way to adjust for such differences is to calculate current expenditures per weighted pupil. This measure "weights" students with special education needs by some measure of additional resources needed beyond those allocated to the average student.[5]

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[5]Weighted Enrollments were calculated as follows: The number of students in each educational need category were multiplied by that category's additional cost factor as embodied in the Public School Education Act of 1975, Sec. 18A: 7A-10. The sum of these products is that district's total "educational need units." The Weighted Enrollment is equal to Total Educational Need Units + Total Enrollment in a district. Thus, a district with 1000 students and 100 Educational Need Units would have a Weighted Enrollment of: 100 + 1000 = 1100.

Table 2 shows the range in spending per weighted pupil between the same 5th and 95th percentiles. The ratio of spending at the 95th percentile compared to the 5th percentile is slightly higher in all three years than for current expenditures per unweighted pupil, but shows the same gradual decline from 1975-76 to 1978-79. The absolute difference in expenditures is almost identical in both cases: $900 per unweighted pupil versus $898 per weighted pupil in 1975-76, and $1080 per unweighted pupil versus $1058 per weighted pupil in 1978-79.

Table 2

Current Expenditures per Weighted Pupil
5th and 95th Percentiles Compared to State Average

	1975-76	1977-78	1978-79
5th Percentile	$ 1076	$ 1358	$ 1497
95th Percentile	1974	2333	2555
Ratio of 95th Percentile to 5th Percentile	1.83	1.72	1.71
State Average	$ 1473	$ 1779	$ 1959
Ratio of 5th Percentile to Average	0.73:1	0.76:1	0.76:1
Ratio of 95th Percentile to Average	1.34:1	1.31:1	1.30:1

Source: New Jersey State Department of Education data compiled and analyzed by the Education Policy Research Institute, Educational Testing Service, Princeton, New Jersey.

It appears, therefore, that the new law has both slowed the relative growth in expenditures at the upper end of the range and gradually "leveled-up" expenditures -- that is, narrowed the gap between low-expenditure districts and the state average or mean. Another statistical measure of "leveling-up," the McLoone Index, supports this finding. The

McLoone Index measures variation in a district's school revenues per-pupil below the state median. A comparison of McLoone indices for two years shows how much closer low-spending districts have come to reaching the state median. This index ranges between 0 and 1; the closer this index is to 1, the less dispersed are values below the median. The McLoone indices for current expenditures per-pupil in New Jersey for 1975-76 and 1978-79 were 0.878 and 0.890 respectively, only a slight improvement.

Relating Educational Resources to Educational Need

The Public School Education Act of 1975 restructured state aid to students with special education needs -- students from low-income families, students with physical and mental handicaps, students in need of bilingual education, and so on. The amount of aid earmarked for these programs increased nearly $73 million, or 112 percent between 1975-76 and 1978-79. One way to judge the effect of this increased aid on funding for special students is to group districts by a Weighted Pupil Index that shows the relationship of the number of weighted pupils to the number of students enrolled in the district.[6] The larger this number, the greater the level of the district's educational need as defined by the law. The range among districts has averaged from 1.00 to 1.20, with the state's poorest districts showing the highest levels of educational needs.

Table 3 shows the relationship between educational need, as measured by the Weighted Pupil Index, and current expenditures per weighted pupil. Group 1, with one-seventh of the state's students, includes those districts with the highest

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[6]The Weighted Pupil Index is the ratio of Weighted Enrollment to Unweighted Enrollment. Thus, a district with 1000 students and 100 Educational Need Units would have a Weighted Pupil Index of: $\frac{100 + 1000}{1000} = 1.10$

level of educational need in each of the three years. Group 7, also containing one-seventh of the state's students, includes those districts with the lowest level of educational need.[7] In all three years, districts with the highest level of educational need spent less per weighted pupil than did those districts with the lowest level of need. In addition, the

Table 3

Relationship between Educational Need and Expenditures

Districts Grouped by Weighted Pupil Index[a,b]	Current Expenditures per Weighted Pupil, 1975-76	Current Expenditures per Weighted Pupil, 1977-78	Current Expenditures per Weighted Pupil, 1978-79
Group 1 (highest)	$ 1444	$ 1580	$ 1815
Group 2	1397	1712	1847
Group 3	1457	1796	1951
Group 4	1504	1803	1953
Group 5	1458	1845	1991
Group 6	1499	1780	2046
Group 7 (lowest)	1555	1980	2141
State Average	1473	1779	1959

[a]Total Weighted Enrollment/Pupils Enrolled

[b]Each Interval contains an equal number of pupils

Source: New Jersey State Department of Education data compiled and analyzed by the Education Policy Research Institute, Educational Testing Service, Princeton, New Jersey.

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[7]In 1975-76, the range of the Weighted Pupil Index in Group 1 was 1.09 to 1.19; in 1978-79 it was 1.13 to 1.21. Similarly the range of need in Group 7 in 1975-76 was 1.0 to 1.03; three years later it was 1.0 to 1.04.

difference in average per-pupil expenditures between groups 1 and 7 grew from $111 in 1975-76 to $326 in 1978-79. In the former year, the highest-need districts were spending, on average, $1444 per weighted pupil, or 98 percent of the state average. In the latter year, the expenditure of $1815 was 93 percent of the state average.

Achieving "Fiscal Neutrality"

The New Jersey Superior Court and the legislature were also concerned about equity to taxpayers. In its 1972 decision, the Superior Court set as a goal the equalization of "the tax burden in support of [educational] programs."[8] Although the State Supreme Court rejected this goal, legislators perceived a politically strong desire for a school finance system that is "fiscally neutral" -- where local district wealth does not determine how much money is available for education. The Public School Education Act of 1975 reflects this desire in its formula structure; that is, two districts which levy the same property tax rate should receive identical per-pupil revenues through combined state aid and local taxes, regardless of their property wealth.

Several measures are useful in determining the extent to which the New Jersey school finance system has become "fiscally neutral". First, one can examine the relationship between property wealth, current expenditures per-pupil, and school tax rates. Using this measure, a system is not "fiscally neutral" when districts with high valuations per pupil and low tax rates spend more than districts with lower property wealth and higher tax rates.

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[8] 287 A. 2d 187 (1972).

To measure this relationship, all districts in the state have been ranked from low to high on their equalized valuation per-pupil for the years 1975-76 and 1978-79. Districts have then been divided into seven groups containing an equal number of pupils for each of these years.[9] Table 4A shows that, in 1975-76, wealthy districts not only spent more on education, but did so with a lower school tax rate. While the districts with least property wealth taxed at an average rate of $1.79 per $100 of equalized valuation and spent $1504 per-pupil, wealthiest districts spent an average of $1752 (1.16 times as much) with an average tax rate of $1.17 per $100 of equalized valuation (35 percent less). The expenditure disparities are even greater if one looks at current expenditures per weighted pupil ($1372 versus $1681).[10]

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[9]Thus, a district which was in the lowest wealth group in 1975-76 may not be in that same interval three years later if its per-pupil wealth increased at a rate substantially above that of other districts in its group.

[10]These averages are weighted by the number of students in each district in the group. Thus, the figures for Newark, with 70,000 students, will contribute more heavily to the average for Group 1 than the figures for Salem City with 1500 students. Since Newark has approximately 35 percent of the students in Group 1, it has been argued that Newark's spending decisions determine the change in this group. The following are figures for Group 1 without Newark:

	Current Expenditures per-Pupil	Current Expenditures per Weighted Pupil	School Tax Rate
1975-76	$ 1376	$ 1267	$ 1.85
1978-79	1928	1702	1.60

Table 4A

Relationship between Property Wealth, Current Expenditures and Tax Rates, 1975-76

	Equalized Valuation per-Pupil	Current Expenditures per-Pupil	Current Expenditures per-Weighted Pupil	Current School Tax Rate
Group 1	Less than $33,599	$ 1504	$ 1372	$ 1.79
Group 2	$33,600 - $45,449	1414	1324	2.12
Group 3	$45,450 - $58,699	1411	1347	2.00
Group 4	$58,700 - $67,199	1460	1401	1.99
Group 5	$67,200 - $78,499	1604	1543	1.89
Group 6	$78,500 - $95,499	1689	1628	1.74
Group 7	$95,500 and over	1752	1681	1.17
State Average		1550	1473	1.69

Table 4B

Relationship between Property Wealth, Current Expenditures and Tax Rates, 1978-79

	Equalized Valuation per-Pupil	Current Expenditures per-Pupil	Current Expenditures per Weighted Pupil	Current School Tax Rate
Group 1	Less than $ 37,000	$ 1994	$ 1760	$ 1.67
Group 2	$ 37,000 -$ 54,999	1933	1763	1.57
Group 3	$ 55,000 -$ 73,999	1978	1816	1.55
Group 4	$ 74,000 -$ 87,999	1994	1882	1.58
Group 5	$ 88,000 -$102,999	2200	2061	1.69
Group 6	$103,000 -$125,199	2258	2154	1.67
Group 7	$125,200 and over	2390	2262	1.11
State Average		2113	1959	1.47

Source: New Jersey State Department of Education data compiled and analyzed by the Education Policy Research Institute, Educational Testing Service, Princeton, New Jersey.

Table 4B shows the same relationship for the year 1978-79. Two trends are evident. First, the law has succeeded in significantly equalizing tax rates. The differences in average school tax rates among the first six groups have disappeared. Yet equal tax rates have not yielded equal expenditures. The average current expenditure per-pupil in Group 6 is $274 greater than the average expenditure in Group 1, an increase of $100 in three years. Second, the expenditure/tax rate gap between the poorest and wealthiest groups of districts (1 and 7) has grown. The poorest districts now spend an average of $1994 per-pupil with a tax rate of 1.67 per $100 of equalized valuation, while the wealthiest districts spend $2390 (1.2 times as much) with an average tax rate of $1.11 (34 percent less). If one uses as a measure current expenditure per weighted pupil, the wealthiest districts are spending, on average, nearly 1.3 times as much as the poorest. Three years after the implementation of the Public School Education Act of 1975, therefore, wealth is still a major factor in determining how much districts spend on their school children.

A second way of looking at the "fiscal neutrality" of a school finance system is to calculate the dollars a district can raise through a combination of state and local dollars for each $1.00 of tax levy.[11] To the extent that these figures

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[11] Another measure of "fiscal neutrality" is the Gini coefficient. This statistic indicates to what degree the distribution of wealth follows the same pattern as the distribution of current expenditures. Are the poorest 50 percent of the pupils receiving 50 percent of the resources? A valid Gini coefficient can range from 0.0 to 1.0. A coefficient of 0.0 indicates total equity; a value of 1.0 indicates total inequity. The Gini coefficients for current expenditures per pupil in 1975-76, 1977-78 and 1978-79 were .039, .045 and .042 respectively. The coefficients for current expenditures per weighted pupil were .048, .056 and .053 for these same years. Therefore, on this measure little progress towards equalization has been shown.

are similar, school districts with equal tax rates can provide equal levels of educational support. Tables 5A and 5B show the level of educational resources (defined as the sum of locally raised revenues[12] and state equalization aid) available per $1.00 of tax levy for districts grouped by wealth in 1975-76 and 1978-79. Since additional resources for students with special educational needs are distributed by flat grant, state and federal categorical aids are not included in this calculation.

In 1975-76, the poorest group of districts (group 1) could raise more for each dollar of tax levy than groups 2 to 4, but only 52 percent as much as districts in group 7. In 1978-79, all districts had more resources per dollar of tax levy, but the position of the low-wealth districts had slipped. Group 1 now has the lowest ratio of all the groups, at 76 percent of the state average, and 48 percent of the highest-wealth group.[13]

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[12] Locally-raised revenues include the free balances appropriated in that year's budget.

[13] The figures for group 1 without Newark are $651 (1975-76) and $981 (1978-79).

Table 5A

Relationship between Property Wealth and Education Funds per Dollar of Tax Rate, 1975-76

	Equalized Valuation per-Pupil	Education Funds Available per Dollar of Tax Rate[a]
Group 1	Less than $ 33,599	$ 727
Group 2	$ 33,600 -$ 45,449	615
Group 3	$ 45,450 -$ 58,699	664
Group 4	$ 58,700 -$ 67,199	695
Group 5	$ 67,200 -$ 78,499	797
Group 6	$ 78,500 -$ 95,499	906
Group 7	$ 95,500 and over	1404
State Average		835

Table 5B

Relationship between Property Wealth and Education Funds per Dollar of Tax Rate, 1978-79

	Equalized Valuation per-Pupil	Education Funds Available per Dollar of Tax Rate[a]
Group 1	Less than $ 37,000	$ 954
Group 2	$ 37,000 -$ 54,999	1040
Group 3	$ 55,000 -$ 73,999	1129
Group 4	$ 74,000 -$ 87,999	1125
Group 5	$ 88,000 -$102,999	1165
Group 6	$103,000 -$125,199	1245
Group 7	$125,200 and over	1972
State Average		1245

[a]Calculated as:

$$\frac{\text{Net Current Expense Budget + Balance Appropriated}}{\text{Current School Tax Rate}}$$

This ratio is weighted by size of district.

Source: New Jersey State Department of Education data compiled and analyzed by the Education Policy Research Institute, Educational Testing Service, Princeton, New Jersey.

Closing the Gap in School Tax Rates

A final criterion of equity is the extent to which taxpayers "are taxed at different rates throughout the state for the same public purpose."[14] Three factors affect school tax rates in a district: the size of its education budget, its amount of state and federal aid, and its property wealth. If growth in expenditures outstrips increases in aid and/or growth in the district's tax base, it must increase its tax rate to raise additional revenues. If budgets increase at a slower rate than valuations, tax rates will decline. Two different methods can be used to measure tax rate disparities: the range in school tax rates throughout the state, and the distribution of tax rates across property wealth intervals.

As shown in Table 6, high tax rate districts in 1975 levied tax rates at 147 percent of the state average while the low tax rate districts were at 50 percent of the average.[15] By 1977-78, the use of state aid and the capping of expenditures in high-spending districts had brought an overall decrease in tax rates and a substantial narrowing in the range of rates. In the following year, although rates decreased overall, the decline was largely in low-rate districts. In 1978-79, the range in rates between the 5th and 95th percentiles grew slightly; high tax rate districts

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[14] 287 A.2d 137 (1972).

[15] These figures will differ from those in Money and Education: Where Did the 400 Million Dollars Go? as they reflect final audited figures.

remained at 137 percent of the state average, while low-rate districts dropped from 55 percent to 52 percent of the average. The caps and rapidly rising property valuations continued to force tax relief in low-rate districts, while sluggish growth in both state aid and property wealth left the high-rate districts in roughly the same position as in 1977-78.

Table 6

Current School Tax Rate
5th and 95th Percentiles Compared to State Average

	1975-76	1977-78	1978-79
5th Percentile	2.48	2.04	2.01
95th Percentile	0.84	0.82	0.76
State Average	1.69	1.50	1.47
Ratio of 5th Percentile to Average	1.47:1	1.36:1	1.38:1
Ratio of 95th Percentile to Average	0.50:1	0.55:1	0.52:1

Source: New Jersey State Department of Education data compiled and analyzed by the Education Policy Research Institute, Educational Testing Service, Princeton, New Jersey.

When we look at the distribution of tax rates across districts grouped by wealth (Table 7) we find that tax rates declined for all groups between 1975-76 and 1977-78. The greatest drops were in groups 2 to 4--districts that received the largest increases in state aid in the first year of the new law. The pattern changes, however, in the third year. Although the state's average tax rate decreased slightly in 1978-79, in the poorest districts rates increased, while in all other groups rates stayed steady or continued to decline.

Table 7

Relationship between Property Wealth and Current School Tax Rate

Equalized Property Valuation	Current School Tax Rate 1975-76	1977-78	1978-79
Group 1 (lowest wealth)	$ 1.79	$ 1.62	$ 1.67
Group 2	2.12	1.62	1.57
Group 3	2.00	1.59	1.56
Group 4	1.99	1.59	1.58
Group 5	1.86	1.74	1.69
Group 6	1.74	1.68	1.67
Group 7 (highest wealth)	1.17	1.14	1.11
State Average	1.69	1.50	1.47

Source: New Jersey State Department of Education data compiled and analyzed by the Education Policy Research Institute, Educational Testing Service, Princeton, New Jersey.

Table 8 shows the average per-pupil change in current expenditures, state aid and locally-raised revenues between the 1977-78 and 1978-79 school years. Unlike the first years of the school finance reform when increases in state aid surpassed increases in expenditures for the low- and middle-wealth groups, expenditure growth in the third year was uniformly greater than changes in aid payments. As a result, all groups were forced to raise more money from unequalized revenue sources.

Table 8

Changes in Current Expenditures, State Aid, and Locally-Raised Revenues Relative to Growth in Property Valuations, Districts Grouped by Property Wealth, 1977-78 to 1978-79

Equalized Valuation per Pupil, 1978-79	Per-Pupil Change in Current Expenditures[a]	Per-Pupil Change in State Aid	Per-Pupil Change in Locally Raised Revenues	Per-Pupil Change in Equalized Valuations 1977 - 1978	Increased Revenues From Growth in Tax Base[b]
Less than $ 37,000	$ 203	$ 152	$ 37	$ 932	15
$37,000 - $ 54,999	274	172	19	2,437	39
$55,000 - $ 73,999	196	130	81	4,994	79
$74,000 - $ 87,999	182	68	97	6,705	107
$88,000 - $102,999	188	69	105	8,678	138
$103,000 - $125,199	222	40	187	11,423	199
$125,200 and over	212	28	169	19,397	221
State Average	205	87	106	8,792	132

[a] Includes some federal aid, appropriation of surpluses, and miscellaneous revenues.

[b] 1977-78 school tax rate applied to per-pupil change in equalized valuations, 1977-78.

Source: New Jersey State Department of Education data compiled and analyzed by the Education Policy Research Institute, Educational Testing Service, Princeton, New Jersey.

Raising additional local funds affected tax rates through two factors: the relative wealth of the district and the growth of its tax base. The low-wealth districts were doubly disadvantaged. Between 1977 and 1978 their tax base grew, on average, $932 per-pupil; applying their 1977 tax rate of $1.60 per hundred to this growth, these districts could raise only an additional $15 per-pupil without raising local tax rates. The remaining funds ($22 per-pupil) had to be raised from an average tax base of $28,000 per-pupil. The tax base of the wealthiest districts, however, increased an average of $19,000 per-pupil. At their 1977 tax rate of $1.14 per hundred, they could increase locally-raised revenues by $221 per-pupil, an amount exceeding their actual change in expenditures of $169; their school tax rates therefore fell.

How Far Have We Come?

In response to the court mandate for a "thorough and efficient" system of education, the legislature drew up in the Public School Education Act of 1975 a "funding structure which will ensure that adequate financial resources shall be available to enable a system of free public schools to operate throughout the State." Although it did not establish any criteria for the level of "adequate" funding, in 1978-79 the legislature supported 35 percent of the districts' current operating budgets.[16]

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[16] In November 1978 the legislature amended the 1975 Act to a state commitment to provide 40 percent of total educational expenditures within available tax resources. This 40 percent, however, includes state contributions to the Teachers Pension and Annuity Fund and state aid for debt service and capital outlay--expenditures which are not included in the measure, "current expenditures," used in this report.

In this chapter we have seen that New Jersey's school finance program has succeeded in equalizing school tax rates across all but the wealthiest districts. The new law has slightly narrowed the range in per-pupil expenditures. The absolute difference in current expenditures increased, however, from $900 per-pupil to $1080 per-pupil, and low-property-wealth districts continued in 1978-79 to receive fewer state and local dollars for each dollar of tax levy than moderate and wealthy districts.

Most change occurred in the first two years, when districts absorbed the large initial aid increase due to the reform legislation. In the last year, when property valuations rose unequally, low-wealth districts began to increase school tax rates once again; rates in wealthier districts stabilized or continued to drop. After three years, district property wealth continues as a major factor in determining levels of educational expenditures in New Jersey.

CHAPTER II

EDUCATION BUDGET CAPS: CURSE OR CURE-ALL?

Perhaps the most controversial sections of the Public School Education Act of 1975 placed annual limits on the growth of school budgets throughout New Jersey. These "budget caps" were designed to serve four major purposes:

(1) to prevent large and inefficient budget increases, particularly in districts where the flow of new state aid grows suddenly;

(2) to limit state liability for future financial aid;

(3) to assure that a substantial portion of new state aid funds are passed along to taxpayers as property tax relief; and

(4) to move the school districts toward more nearly equal expenditures per-pupil.[1]

While there has been general support for the philosophy underlying the caps, few people have been satisfied with them. While caps have braked the relative expenditure growth of high-spending districts and helped to lower school tax rates, they have not significantly closed the gap in per-pupil expenditures between the highest- and lowest-spending districts. Legislators and educators have also argued that the caps--coupled with inflation, accelerating costs of fuel, utilities and insurance, and normal employee increments--have eroded the quality of educational programs.[2]

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[1] Budget Caps, Baseline Report, Monitoring Program 4 - Budget Caps, Joint Committee on the Public Schools, New Jersey Legislature, September 21, 1976, pp. 2-3.

[2] Senator Matthew Feldman "Is the Dollar Sign a Sign of the Times for Our Schools?" New York Times, January, 1979.

This chapter discusses three aspects of the education budget caps: their structure; their effectiveness in achieving the four goals listed above; and some criticisms.

The Structure of Education Budget Caps

The formulas used to calculate the amount by which school districts may increase their budgets are composed of three components: (1) a basic growth rate related to growth in the state's property valuation; (2) an equalization factor that allows districts spending below the state average to increase their budgets faster than districts spending above the average; and (3) a base expenditure level, (NCEB)--the district's total current expense budget less state and federal categorical aid, tuition and miscellaneous revenues, and free balances appropriated for that year. Table 9 illustrates the specific operation of the cap formulas.

A district can exceed its cap limitation by (1) procuring a waiver of the limitation and/or (2) appropriating free balances (last year's surplus revenues) for this year's budget. Cap waivers are granted at the discretion of the Commissioner of Education to allow flexibility in calculating budget limitations for districts facing increased enrollments or other liabilities, such as increased tuition payments, new building openings, the inclusion of a large free balance in the prior year's budget, or the district's inability to meet "thorough and efficient" requirements. Since a district's expenditure base, or NCEB, does not include the amount of free balances appropriated during the school year, districts with sizable surpluses can also exceed the cap by allocating these local funds on top of their capped budgets.

The capped budget (with waivers included) is the maximum amount that a district can spend. Budget caps are actually

Table 9

The Calculation of New Jersey's Education Budget Cap Formula

		Basic Growth Rate (The larger of:)		Equalization Factor		Base Expenditure Level
For districts spending in the prior year <u>below</u> the state average NCEB per pupil:		3/4 x The latest annual percentage change in statewide equalized valuation or the average of the last three years' annual percentage changes.	X	The prior year's state <u>average NCEB per pupil</u> / The prior year's district NCEB per resident pupil	X	The prior year's state average NCEB per pupil, times the prior year's resident enrollment of the district
District A	Budget Increase	= 3/4 x .08	X	$\frac{1500}{1200}$	X	1500 X 1000 pupils
		= .06 x 1.25 x 1,500,000 = 112,500 or $112.50 per pupil				
For districts spending in the prior year <u>above</u> the state average NCEB per pupil:		The larger of: 3/4 x The latest annual percentage change in statewide equalized valuation or the average of the last three years' annual percentage changes.	X	The prior year's state <u>average NCEB per pupil</u> / the prior year's dsstrict NCEB per resident pupil	X	The prior year's district NCEB per pupil; times the prior year's resident enrollment of the district
District B	Budget Increase	= 3/4 x .08	X	$\frac{1500}{1800}$	X	1800 X 1000 pupils
		= .06 x .8334 x 1,800,000 = 90,000, or $90 per pupil				

Source: This table is drawn from <u>The Fiscal Impact of Budget Caps in 1976-77</u>, Second Periodic Report, Monitoring Program 4-Budget Caps, Joint Committee on the Public Schools, New Jersey Legislature, August 12, 1977.

applied to expenditures during the budgeting process. In New Jersey, most school districts must go to the voters for budget approval. Many school boards cut their budgets following public hearings, and therefore submit to their voters or boards of estimate budgets below the cap level. In other cases budgets at the cap level are defeated at the polls and later cut by municipal governing bodies. The level of total current expenditures in a district thus often falls below the budget cap.

The Fiscal Impact of the Caps, 1976-1978[3]

The education budget caps began in 1976. After three years of operation, how effective have they been in meeting the legislature's four purposes? (See p. 29)

Preventing Large, Inefficient Budget Increases

In its first year the Public School Education Act of 1975 substantially increased the level of state equalization aid to education. In 1975-76, before the new law, the state distributed $432 million in equalization aid; in 1976-77 that figure rose nearly 50 percent to $626 million. The legislature was concerned that many districts getting these large increases would not be able to absorb them into their school budgets. Although the legislature never defined what constitutes a "large and inefficient" budget increase, it seems to have felt that an inflation factor modified by an "equalization factor" would allow low-spending districts to enlarge their budgets while providing taxpayer relief.

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[3]This section is based on Margaret E. Goertz and Jay H. Moskowitz, Caps and Kids: The Impact of New Jersey's Education Budget Caps. Paper presented at the annual meeting of the American Education Finance Association, Washington, D.C. (Princeton, NJ: Education Policy Research Institute, Educational Testing Service, January 1979).

This assumption was based on the historical state-wide growth of property valuations. When the law was passed, valuations were rising at an annual rate of 12 to 13 percent. Therefore, budget caps were not very restrictive in their first year of operation; in 1976-77, 68 percent of the districts had cap increases of 10 percent or more. Since 1975, however, property values have risen slowly; the basic growth rate in the cap formula dropped from 8.8 percent in 1976-77 to 5.4 percent in 1978-79. In that latter year 60 percent of the state's school districts thus had cap increases below 6 percent.

Limiting State Liability for Future Aid

New Jersey uses a guaranteed tax base formula to distribute equalization aid. State aid to a district grows in direct proportion to its increased net current expense budget (NCEB).[4] By capping the growth in NCEB, the state automatically limits its liability for state aid in the next year.

In 1976-77, the budget caps permitted, state-wide, a maximum increase in the statewide total NCEB of $214 million or 10.4 percent above the 1975-76 level. In 1977-78, capped NCEB's had increased 7 percent, while the growth in 1978-79 capped NCEB's was 7.5 percent; on a per-pupil basis, these percentages were 8.9 percent and 10.8 percent respectively. These limitations have worked to brake increases in the state's liability for this program. Equalization aid paid in 1978-79 represented potentially only a $45 million, or 7 percent, increase; growth in 1979-80 equalization aid could not exceed $52 million.

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[4]The state share is calculated annually as:

$$\left[1 - \frac{\text{District's prior year valuation per pupil}}{135\% \text{ state average valuation per pupil}}\right] \times \left[\begin{matrix}\text{District's prior} \\ \text{year NCEB}\end{matrix}\right]$$

The district's NCEB is equalized up to the 65th percentile average NCEB for that district's grade plan.

Guaranteeing Property Tax Relief

The 1975 school finance law tried to meet two tax relief concerns. Districts with large increases in state aid under the new law would be forced to pass on some of that increase for property tax relief. Second, it was hoped that all taxpayers would see a stabilization of property tax rates to compensate for the imposition of a $900 million income tax. This latter purpose is also reflected in caps imposed in 1976 on municipal, county, and state budgets.

In Money and Education: Where Did the 400 Million Dollars Go? we showed that 80 percent of the new equalization aid was allocated to school districts with a per-pupil valuation of $30,000 to $70,000. The caps forced these districts to use some of their aid to lower the level of locally-raised revenues for schools in that first year. In 1976-77, the maximum possible current school tax rate for districts with a valuation of $30,000 to $49,999 was estimated to be, on average, $1.75, a decrease of $0.31 from the 1975-76 rate.[5] Districts in the $50,000 to $69,000 range were similarly forced to lower their average school tax rates from $1.99 to a maximum of $1.70. The higher wealth districts ($70,000 and above) were limited in how much they could increase taxes. The maximum growth in NCEB per-pupil allowed under the caps was nearly offset by valuation growth. The result was a stabilization of school tax rates for 1976-77. The same patterns appeared in the second and third years of caps.

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[5] The maximum possible current school tax rate is equal to:

$$\frac{\text{capped NCEB minus equalization aid}}{\text{equalized property valuation}}$$

Closing the Expenditure Gap

A final purpose of the education budget caps was to close the gap in expenditures. The levels of expenditures of low- and high-spending districts were to more closely approach parity. Low-spending districts can increase their spending at a faster rate than the average, while growth in the budgets of high spending districts is limited to a percentage below the basic growth rate.

The analysis of expenditure disparities for 1978-79 in Chapter I showed, however, that the gap has not narrowed significantly. Two factors keep the cap from making expenditures move more closely together: (1) the ability of high-spending districts to circumvent the caps by using cap waivers, appropriating free balances, and as a result of higher-than-average enrollment declines; and (2) the unwillingness or inability of low-spending districts to spend up to their caps.

Exceeding the Cap. A district can exceed its cap limitation in three ways: procure a waiver of the limitation, appropriate free balances (last year's surplus revenues) and/or have a higher-than-average rate of enrollment decline.

1. Cap waivers. Some critics worried that cap waivers might be too easily granted, but the actual impact of this device has been minimal. Although nearly $39 million in waivers were granted to 146 non-vocational districts in 1978-79 due to the very restrictive caps, this amount was only 1.2 percent of that year's net current expense budget and an average of less than $30 per pupil state-wide.

2. Appropriation of free balances. Districts with sizable surpluses can use these local funds to exceed their budget caps. In 1977-78 and 1978-79, low-spending districts allocated the largest percentage of capped NCEB (4.8%) in free balances, although wealthy districts continued to allocate slightly more on a per-pupil basis (for 1978-79, $100 vs. $67).

3. Declining enrollments are the major factor that lets districts increase their per-pupil spending at a rate above that set by the budget caps. The budget cap is calculated using the previous year's enrollment. Districts with declining enrollments benefit from this in two ways: (1) they receive a slightly larger percentage increase in expenditures over the previous year, and (2) this larger capped budget supports a smaller number of students, creating a larger per-pupil expenditure.[6]

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[6] For example, District B in Table 9 used a prior year's enrollment of 1000 pupils to determine its base expenditure level. Assuming an enrollment decline of 5 percent, if the district had used a current year enrollment of 950 in its calculation, its budget cap would have been 4.75 percent instead of 5 percent.

$$.06 \times \frac{1500}{1800} \times 1800 \times 950 = 85,500$$

$$\frac{85,500}{1,800,000} = .0475$$

In addition to a more liberal cap, declining enrollments have stretched District B's capped budget even further. The cap is calculated on prior year's enrollment, or

$$\frac{1,800,000 + 900,000}{1,000} = 1,890$$

When this cap is divided by current year's enrollment we get a cap per-pupil of:

$$\frac{1,800,00 + 90,000}{950} = 1,989$$

Thus, the new per-pupil expenditure is actually 10 percent above the prior year's expenditure of $1800, rather than the 5 percent restriction of the cap.

Declining enrollments would not be of concern if they were evenly distributed across districts at all expenditure levels. Enrollment declines, however, have been much steeper in high-expenditure districts. High-expenditure districts lost nearly 7 percent of their students in the last school year, while enrollments in low-expenditure districts remained steady.

The cumulative effect of these three factors -- waivers, appropriation of free balances and declining enrollment -- has been to permit high-spending districts the potential to spend, per-pupil, 113 percent of their capped budgets. By 1978-79, this represented an average increase of $300 per-pupil. The numbers for low-spending districts in that year were 107 percent, or an extra $100 per pupil. Table 10 shows the relative contribution of these factors.

Table 10

Components of Potential Budget Increases over Capped NCEB, 1978-79

	Net Current Expense Budget		
	Low	Medium	High
Capped NCEB/pupil[a]	$ 1448	$ 1748	$ 2165
Waiver/pupil	+ 28	+ 30	+ 24
Balance appropriated/ pupil	+ 67	+ 66	+ 100
Enrollment change[b]	+ 9	+ 66	+ 168
"Adjusted" capped NCEB/pupil[c]	$ 1552	$ 1910	$ 2457
% Increase over Capped budget	107.2%	109.3%	113.5%

[a] Capped NCEB/Prior year's enrollment

[b] Calculated as:

$$\frac{\text{Capped NCEB}}{\text{Current Year's Enrollment}} - \frac{\text{Capped NCEB}}{\text{Prior Year's Enrollment}}$$

[c] Sum of Capped NCEB per-pupil, waiver per-pupil, balance appropriated per-pupil and enrollment change.

Source: New Jersey State Department of Education data compiled and analyzed by the Education Policy Research Institute, Educational Testing Service, Princeton, New Jersey.

It appears, therefore, that the "squeeze" assumption built into the budget cap provision has been more than overcome by the impact of "loopholes" and demographic changes. Although low-spending districts are allowed a larger rate of growth in the cap formula, this advantage is lost on a per-pupil basis largely because of more severely declining enrollments in high-expenditure districts.

Local district behavior. Our discussion so far assumes that districts will spend up to their expenditure caps. The success of the "squeeze" factor in the cap formula rel[illegible] on districts, especially low-spending ones, doing just this. Yet we saw in Chapter I that low wealth districts had to increase their tax rates in 1978-79 in order to finance increased expenditures; had they chosen to spend up to their caps, this increase would have been even larger.

This problem arises because the distribution of state equalization aid is based upon the previous year's expenditures. Although this approach is administratively sound, it creates difficulty for low wealth districts. Any increase in expenditures which exceeds the growth in state aid must be wholly financed from local revenues. The equalization, or state support, of this growth does not occur until the following year. If the growth in needed local revenues exceeds growth in the local tax base (see Table 8, p. 25), the district must raise its school tax rate or decrease its school expenditures.

Limitations to Caps' Effectiveness

New Jersey has had three years of experience with education budget caps. Their structure and effects have been scrutinized by educators, bureaucrats, legislators and researchers. Two major criticisms predominate:

- Caps have been too restrictive; and
- Caps have failed to significantly decrease the per-pupil expenditure gap.

The Caps Have Been Too Restrictive

The legislature's decision to limit the average school budget increase to a rate equal to three-quarters of the growth in state-wide property valuations has strained many local education budgets. In 1978-79 the basic growth rate in the cap formula was 5.4 percent--considerably below the inflation rate. As a result, 60 percent of the state's districts could increase their budgets by less than 6 percent. Many critics suggest that the three-quarter factor be eliminated or that this measure be replaced by growth in per-capita income, the rate of increase applied to the state budget.[7]

In discussing how restrictive the caps are, however, one must consider declining enrollments and the relationship of budget limitations to this phenomenon. Formulas for state aid and education budget caps buffer districts with declining enrollments for one year by using pre-budget year student counts. In the second year, state aid payments may decrease,

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[7]

	Change in per-Capita Personal Income	Change in Equalized Valuations
1976 - 1977	9.55%	5.87%
1977 - 1978	10.38%	7.73%

but caps never force a district to cut total expenditures. Therefore, when expenditures are calculated per-pupil, the growth in expenditures in districts with declining enrollments is much greater than the budget cap rate. Before deciding whether to liberalize budget caps, the state and local school districts must deal with the ability of districts to maintain or cut expenditures as their enrollments drop.

Caps Have Failed to Significantly Decrease the Per-Pupil Expenditure Gap

By granting lower-expenditure districts a faster growth rate, the lawmakers expected to "squeeze" together expenditures by means of the cap formula. But five factors have limited the success of this "squeeze" assumption in narrowing disparities in per-pupil expenditures:

- The components of education revenues subject to the cap, particularly the treatment of free balances;
- The availability and use of cap "waivers";
- The impact of declining enrollments, which have pushed per-pupil expenditures up more rapidly in high-spending districts than in low-spending ones;
- The reluctance and/or inability of low-spending districts to spend up to their caps; and
- The relatively soft "squeeze" factor in the formula.

Caps can effectively be used to limit growth in school district expenditures if a number of thorny problems are addressed: (1) the need to cap the use of free balances as well as annual tax revenues; (2) the need to cap the growth in per-pupil expenditures, rather than the growth in total budgets, in a time of declining enrollments; and (3) the need for tighter controls over the granting of cap waivers.

Caps cannot, however, succeed in "leveling-up" expenditures in low-spending districts unless non-local revenues are available to help. In the poorest districts, less frequent use of the cap does not guarantee small tax bills. With valuations growing less than two percent a year, these districts cannot increase their budgets the permissible 8 to 12 percent a year. They cannot afford the local share of this increase, even when it is only 20 cents on the dollar, if state equalization aid to offset these increases is not payable until the next budget year.

CHAPTER III

WHAT DOES THE MONEY BUY?

Chapters I and II focused on spending differences among districts in New Jersey and policies designed to narrow these differences. This chapter asks how the education dollars have been spent.

- To what extent have the new state aid dollars been used to fund education?
- How have districts spent the dollars that went to school budgets?
- What are the resulting expenditure patterns, including the distribution of teaching staff?

Since this chapter focuses on services to students, analysis has been limited to school districts which offer education in grades K-12. It has been found that districts with secondary education spend more on education and show different expenditure patterns than elementary districts which teach fewer subjects, have less elaborate laboratory equipment, smaller libraries, etc. Although the K-12 districts represent fewer than 40 percent of the districts in New Jersey, they educate more than 75 percent of the state's students.

Where Did the New Aid Dollars Go?

A question often asked in the aftermath of school finance reform is: How were the new dollars spent? Does more money make a difference? Daniel Moynihan's thesis about who benefits from school finance reform mirrors the feeling of many citizens and legislators: "Any increase in school expenditures will in

the first instance accrue to teachers, who receive about 68 percent of the operating expenditures of elementary and secondary schools."[1] New Jersey legislators, similarly concerned about districts' ability to spend large increases in state aid efficiently, limited budget expansion by caps.

To test these propositions against New Jersey's new law, we have examined changes in expenditure and revenue patterns in those K-12 districts where aid increases amounted to more than 25 percent of their 1975 budgets. What percent of the increased aid funded tax relief? Has the percentage of total budget spent on teachers' salaries grown? Has the number of teachers grown?[2]

Expenditures Versus Tax Relief

Between 1975-76 and 1977-78, these districts decreased their local support of education by an average of $76 per pupil, while increasing expenditures $392 per student. This decrease in locally-raised revenues enabled the districts to reduce property tax rates by an average of $0.44 per $100 of equalized valuation, a drop of 20 percent.

When these districts were grouped according to relative level of property wealth, fiscal burden, level of spending in 1975, and per-capita income, it was found that the first three of these factors affected the extent to which the districts decreased their level of locally-raised revenues. As shown in Table 11A, districts with low property valuations dropped their support by $80 per-pupil, while moderately wealthy districts

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[1] Daniel P. Moynihan, "Equalizing Education: In Whose Benefit?" The Public Interest, No. 29 (Fall 1972), p.75.

[2] This methodology is drawn in part from Michael W. Kirst, "What Happens at the Local Level after School Finance Reform?" Policy Analysis III: 3(1977), pp. 301-324. See Appendix B for a specific description of the methodology.

Table 11A: Impact of New State Aid Funds on Districts with Largest Increases in State Aid, 1975-76 to 1977-78, Districts Grouped by Property Valuation

Property Valuation per-Pupil, 1975-76	Change in Current Expenditures per-Pupil, 1975-76 to 1977-78	Change in Locally-Raised Revenues per-Pupil, 1975-76 to 1977-78	Change in School Tax Rate 1975-76 to 1977-78
Less than $57,555	+ $397	- $80	- $0.46
$57,555 - $82,995	+ 383	- 68	- 0.39
$82,996 and over	--	--	--

Table 11B: Impact of New State Aid Funds on Districts with Largest Increases in State Aid, 1975-76 to 1977-78, Districts Grouped by Fiscal Burden[a]

Fiscal Burden	Change in Current Expenditures per-Pupil, 1975-76 to 1977-78	Change in Locally-Raised Revenues per-Pupil, 1975-76 to 1977-78	Change in School Tax Rate, 1975-76 to 1977-78
Less than 342.5	+ $452	- $53	- $0.40
342.5 - 696.99	+ 368	- 77	- 0.42
697 and over	+ 366	- 96	- 0.50

[a]Fiscal burden is defined as:

$$\frac{\text{School Tax Rate (1975)* Residential Property Valuation}}{\text{Per Capita Income (1974)}}$$

Table 11C: Impact of New State Aid Funds on Districts with Largest Increases in State Aid, 1975-76 to 1977-78, Districts Grouped by Expenditures per-Pupil

Current Expenditure per-Pupil, 1975-76	Change in Current Expenditures per-Pupil, 1975-76 to1977-78	Change in Locally-Raised Revenues per-Pupil, 1975-76 to 1977-78	Change in School Tax Rate, 1975-76 to 1977-78
Less than $1443	+ $401	- $40	- $0.35
$1443 - $1686	+ 391	- 106	- 0.50
$1687 and over	+ 334	- 144	- 0.72

decreased their support by $68. Similarly, districts with a high level of fiscal burden,[3] decreased local support of education by an average of $96 per-pupil compared to $53 per-pupil in the more lightly-burdened communities (Table 11B). Finally, the impact of the budget caps can be seen when these districts are grouped by their 1975 per-pupil current expenditures in Table 11C. Low-spending districts only provided $40 per-pupil of direct tax relief while raising expenditures $400; the high-spending ones decreased locally-raised revenues more (an average of $144) while increasing expenditures less ($335).

Districts which got large increases in state aid, therefore, used most of the money to increase their spending on education. In addition, low-wealth and low-spending districts directed relatively more of their new funds to education than did those who were more affluent and higher spending.

How Have the Education Dollars Been Spent?

K-12 districts that got substantially more state aid under the Public School Education Act of 1975 increased their per-pupil operating budgets[4] by an average of 24 percent between 1975-76 and 1977-78. This new money was used to:

- increase the number of classroom teachers;
- raise teachers' salaries; and
- increase the percentage of total budget spent on non-teacher instructional salaries.

Table 12 presents average expenditure breakdowns for these districts for 1975-76 (the last year before implementation of the 1975 Act) and for 1977-78 (its second year of

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[3] Fiscal burden is defined as:

$$\frac{\text{School Tax Rate (1975)} * \text{Residential Property Valuation}}{\text{Per-Capita Income (1974)}}$$

for each district.

[4] These figures do not include sundry accounts, federal categorical aid, and expenditures on special school.

Table 12
Expenditures Before and After Implementation of the 1975 Act for K-12 Districts Receiving Large Increases in State Aid

Expenditure Category	Percentage of Expenditures[a] 1975-76		1977-78	
Administration	3.83%		3.73%	
Instruction	70.46		68.83	
Teachers' Salaries		52.8		51.9
Other Instructional Salaries		4.[illegible]		4.77
Other Salaries[b]		8.5		7.59
Other Instructional[c]		4.56		4.57
Transportation	2.90		3.04	
Plant Operation and Maintenance	13.57		13.74	
Attendance and Health	1.61		1.67	
Fixed Charges and Tuition	7.62		9.01	
Average Expenditure	$ 1398.		$ 1729.	
Change in Number of Classroom Teachers		+ 784 (+5.6%)		
Change in Enrollment		- 15,515 (-5.6%)		
Teachers per 1000 Pupils	50.4		56.5	

[a]Current Expenditures excluding sundry accounts, federal categorical aid and expenditures on special schools.

[b]"Other Salaries" include salaries for principals, supervisors of instruction, secretaries and clerical assistants and other personnel.

[c]"Other Instructional" include expenditures for textbooks, school library and audio-visual, teaching supplies and other expenses.

Source: New Jersey State Department of Education data compiled and analyzed by the Education Policy Research Institute, Educational Testing Service, Princeton, New Jersey.

operation). The new money was not used disproportionately for salaries for existing teachers. Salary raises in the group averaged 11.8 percent for the two-year period, less than the state-wide increase of 13.2 percent. And while the percentage of the total budget spent on instruction dropped, the number of classroom teachers increased, as did the percent of the budget spent on non-teacher instructional salaries. As a result, the teacher/pupil ratio (number of classroom teachers per 1000 pupils) increased an average of 12 percent, from 50.4 to 56.5.

What Does Money Buy?

Our findings resemble those of studies in other states[5] and fit the general relationship between increased spending and the level of educational services provided by the districts. Table 13 shows the impact of different levels of expenditures on three measures of educational services -- teacher/ pupil ratio, teacher experience and average teacher salary -- in all K-12 districts. Each group contains approximately the same number of pupils. As the average operating cost[6] increases, the number of classroom teachers per 1000 pupils also increases. The difference in the number of classroom teachers from the lowest-spending districts in 1977-78 to the highest-spending districts was nearly 25 percent, from 51.5 to 64.0. In addition, higher-spending districts had more experienced staff (12.5 years vs. 10.0 years) with higher average salaries.

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[5] See for example, Kirst, op. cit.; Stephen M. Barro and Stephen J. Carroll, Budget Allocation by School Districts: An Analysis of Spending for Teacher and Other Resources (Santa Monica, California: The Rand Corporation, 1975).

[6] Operating cost per-pupil is defined as current expenditures minus federal Elementary and Secondary Education Act aid and tuition expended. Pupils are those enrolled in the district's schools. Analysis of these relationships often excludes expenditures on transportation, since this expense varies widely across districts and is not a discretionary item. We found the patterns were the same when transportation expenditures were excluded from our analysis.

Table 13

Relationship between Operating Cost per-Pupil, Teacher/Pupil Ratios, Teacher Experience and Teacher Salaries for All K-12 Districts, 1977-78

Operating Cost Per-Pupil	Teachers per 1000 Pupils	Average Teacher Experience	Average Teacher Salary
Less than $ 1589	51.5	10.0	$ 14,313
$ 1590 - $ 1712	54.4	10.2	14,846
$ 1733 - $ 1790	55.9	10.2	15,457
$ 1791 - $ 1889	58.7	10.7	14,919
$ 1891 - $ 2009	58.7	11.0	15,718
$ 2010 - $ 2144	59.6	11.4	16,195
$ 2145 and over	64.0	12.5	17,042
State Average	57.4	10.8	15,457

Source: New Jersey State Department of Education and New Jersey Education Association data compiled and analyzed by Education Policy Research Institute, Educational Testing Service, Princeton, New Jersey.

These same patterns appeared when K-12 districts were analyzed by size (fewer than 3,000 students; 3,000 - 5,999 students; and 6,000 students or more) and when elementary districts were examined. The relationships between operating cost per-pupil and these same measures of educational services for elementary districts are presented in Appendix D.

Finally, districts which received large increases in state aid traded off instructional expenditures against expenditures for fixed charges. These tradeoffs are similar in magnitude to those made by all K-12 districts. Table 14 shows that the average percentage of expenditures allocated to "instruction" in all K-12 districts dropped from 69.8 percent to 68.8 percent between 1975-76 and 1977-78, while those allocated to "fixed charges" rose from 7.75 percent to 8.90 percent. The growth in the latter category of expenditures, as well as in transportation, reflects increases in certain uncontrollable costs such as insurance, non-teacher pensions, and fuel.

It appears, therefore, that <u>significantly</u> increasing the level of state aid given to a district does make a difference in the educational opportunities available to its students. Districts that received large increases in state aid under The Public School Education Act of 1975 used this money primarily for education, not for tax relief, and bought <u>more</u> educational services with it. Their spending patterns parallel those of other districts in the state; more money means more staff, and more experienced staff.

Table 14

Expenditures Before and After Implementation of the 1975 Act for all K-12 districts

Expenditure Category	Percentage of Expenditures[a] 1975-76	1977-78
Administration	3.87%	3.79%
Instruction	69.78	68.76
Transportation	3.11	3.24
Plant Operation and Maintenance	13.81	13.68
Attendance and Health	1.64	1.63
Fixed Charges and Tuition	7.75	8.90
Average Expenditure	$ 1532	$ 1863
Change in Number of Classroom Teachers	+ 176 (+ 0.3%)	
Change in Enrollment	- 62,851 (- 6.1%)	
Teachers per 1000 Pupils	54.23	57.44

[a]Current Expenditures excluding sundry accounts, federal categorical aid and expenditures on special schools.

Source: New Jersey State Department of Education data compiled and analyzed by the Education Policy Research Institute, Educational Testing Service, Princeton, New Jersey.

CHAPTER IV

HOW FAR MUST WE GO?

The Public School Education Act of 1975 gave some needed property tax relief to New Jersey's low- and moderate-wealth communities. By limiting expenditures in high-wealth communities, it lowered school tax rates there as well. The school finance program has not succeeded, however, in significantly narrowing expenditure disparities across the state. A number of problems haunt the reform program:

- An ever-widening gap in property valuations between property-poor and property-rich school districts;
- Concentrations of special-need pupils in low-wealth districts;
- The fiscal distress of New Jersey's urban areas; and
- Declining enrollments.

This chapter discusses these problems briefly, relates them to the current formula in operation, and raises issues facing policymakers and citizens alike in their ongoing attempts to give New Jersey's children a "thorough and efficient" education and a fair school finance system.

The Rich Get Richer,...

New Jersey's school finance formula is designed to compensate for differences in per-pupil property wealth. In 1975-76, when the new school finance law was enacted, the range in property valuations per-pupil (95th to 5th percentile) was 5.5:1; by 1978-79, this range had widened to 6.7:1. Some property-poor districts, such as Camden, suffered absolute declines in their tax bases in the past year, while wealthy districts, like Princeton, have seen their property valuations rise 15 to 20 percent.

This growing disparity in wealth means that more state aid is necessary to equalize the ability of low-wealth districts to support education. Table 8 (p. 25) shows that low-wealth districts received the largest increases in aid per pupil last year. Two factors contribute to this pattern. As a district becomes relatively poorer, its state support ratio rises;[1] this increase coupled with the normal growth of its school budget, demands more state aid. For example, during the first three years of the law, Trenton's per-pupil valuation grew by 14 percent from $26,785 to $30,623. At the same time, the state's guaranteed tax base increased 22 percent, from $87,000 to $106,000. Therefore, the state support ratio for Trenton grew from 69 to 71 percent. As a result of this increased support ratio and a 10 percent growth in Trenton's net current expenditures, state equalization aid increased by more than two million dollars from 1976-77 to 1978-79.[2]

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[1] The state-support ratio is:

$$1 - \frac{\text{Prior year's district valuation per-pupil}}{\text{Guaranteed Tax Base}}$$

The guaranteed tax base has been 1.35 times the state average valuation per-pupil for the prior year. The multiplier was reduced to 1.344 for 1979-80.

[2] Equalization aid is calculated as follows. (These numbers are estimates.)

1978-79:	71% * $25,990,000	=	$ 18,453,000
1976-77:	69% * $23,500,000	=	$ 16,215,000
	Change in aid:		+2,238,000

The increase in the state support ratio from 69% to 71% accounted for $500,000 of this change in aid.

This trend counters recent state efforts to stabilize financial support of elementary and secondary education. Modifications in the state aid formula enacted in November 1978 limit state support to 40 percent of total educational expenditures, including state contributions to the Teacher Pension and Annuity Fund. Since commitments under the 1975 Act exceeded this percentage for 1979-80, the state has cut transportation aid, lowered the level of minimum aid, and slightly decreased the guaranteed tax base in order to maintain full funding of aid to low-wealth districts.[3]

Concentrations of Special Need Pupils

Districts with large numbers of special-need pupils spend considerably less than do districts with fewer children with exceptional educational need. First, the low-property wealth districts in the state have greater concentrations of pupils who need special education, compensatory education and bilingual education than do high-property wealth districts. In 1977-78, 45 percent of the pupils in the lowest wealth districts (less than $30,000 valuation per-pupil) were eligible for federally-funded compensatory education programs compared to fewer than 15 percent statewide. Similarly, these districts had three and one-half times as many bilingual education students and one and one-half times as many pupils in special education.[4] In a finance system that relies heavily on local property tax revenues, high educational need districts which are property-poor cannot raise adequate revenues.

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[3] P.L. 1978, Chapter 158, amending P.L. 175, Chapter 212.

[4] Money and Education: Where Did the 400 Million Dollars Go? pp. 23-26.

Second, state aid for special educational programs -- handicapped, bilingual, compensatory education and vocational education -- does not recognize the relative wealth of, or the concentration of educational need in, districts. These aid programs provide a basic per-pupil grant tied to the state average expenditure and the severity of the student's need. Thus, a student enrolled in a program for multiply handicapped children will receive more aid than a student enrolled in a program for perceptually-impaired children, or in a compensatory education program. This approach assumes, however, that every district's cost of providing these programs is similar. Districts with large numbers of these students may have supplementary expenses that the state fails to consider in developing its weightings. Since many of these districts are also low-wealth, they are unable to raise more local resources to provide as full a program as the wealthier districts.

The Fiscal Distress of New Jersey's Urban Areas

Cities in New Jersey face two problems in realizing "thorough and efficient" education. First, they confront declining tax bases from which to fund their local share of educational expenditures. Although declining enrollments have kept per-pupil measures of property wealth climbing, total valuations in many cities are static or in decline. For example, Camden's tax base is undergoing absolute decline, while those of Newark and Trenton are relatively static. While Jersey City and Paterson had valuation increases last year averaging five percent, only Atlantic City is "booming."

Second, there are rising demands for non-educational services that must somehow be financed primarily from these moribund tax bases. A recent study of "municipal overburden" in New Jersey found that the 28 cities eligible for the state's urban aid program spent an average of $307 per-capita on non-educational public services in 1974, nearly one and one-half times the state average. In order to finance all this, the "urban-aid" cities imposed an average municipal tax rate five times higher than non-urban aid cities.[5] Educational programs in the cities thus compete with other municipal services for the shrinking local tax dollar. In Newark, for example, school taxes were 50 percent of total municipal taxes in 1973; by 1977 this percentage had dropped to 22 percent.

Under a guaranteed tax base formula, the amount of state equalization aid given a district is related to its ability to raise local revenues. In New Jersey's cities students are therefore doubly penalized. If these districts are unable to raise adequate school tax revenues, state aid will also decline.

Declining Enrollments

A final issue facing school finance reformers in New Jersey is how to treat the phenomenon of declining public school enrollments. We have seen that in spite of a 3 percent

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[5] Andrew Reschovsky and James Knickman, Municipal Overburden in New Jersey: An Assessment, No. 2, New Jersey Urban Education Research Reports (Trenton, NJ: New Jersey State Department of Education, The New Jersey Urban Education Observatory, December 1976).

decline in enrollments, expenditures for public elementary and secondary education have been rising 7 percent a year. Inflation, the "aging" of professional staff, fixed charges and investment in school plants, and the strucutre of delivering educational services all combine to limit districts' abilities to decrease their expenditures quickly as they lose students.

The differential distribution of declining enrollments and the impact of these expenditure "adjustments" throughout New Jersey has stymied the effort to shrink expenditure disparities. As we saw earlier, the rate of enrollment decline is greatest in high-spending districts, those with the most experienced and therefore more costly staff. Per-pupil expenditures in high-spending districts (with an enrollment decline of 25.5 percent between 1975-76 and 1977-78) increased $484 per-pupil, while those in low-spending districts (with an enrollment decline of 4.8 percent) grew $307 per-pupil.

Neither the state's school funding formula nor its expenditure "cap" are designed to deal specifically with this problem, and the effect of declining enrollments on New Jersey education is currently being studied by the Department of Education.

How Far Must We Go?

New Jersey's school finance formula was designed to treat school districts more or less uniformly. Although it provides general education aid in inverse proportion to a district's property wealth, other factors affect a district's ability to provide a "thorough and efficient"

education -- declining tax base, concentration of special need students, demands for non-educational services, the impact of declining enrollments. They have been ignored. As a result, the formula has not achieved its intended goals.

This report does not seek to present an alternative school finance program. The issues discussed in earlier parts of this chapter must be examined in-depth before reasonable alternatives can be framed. Our findings do suggest some future policy directions, however.

°The legislature should not fix the level of state support for public elementary and secondary education at 40 percent.

The current level of state aid to education is not high enough to overcome existing expenditure disparities related to wealth. The widening gap in per-pupil valuations will make the Court's goal of equity more expensive each year.

By fixing its commitment at a given percentage (especially at only 40 percent), the state will have to concentrate its resources more and more in the poorest districts. The long-term impact of this will be to intensify the existing two-tiered system of school finance. The cut-off point for the "second tier" is now around the state average valuation, but as wealth disparities grow, this level will drop unless additional resources are provided. Equity can never be achieved as long as poor districts are denied the opportunity to raise the same level of resources as the wealthiest districts in the state.

- If the state uses a funding formula designed to guarantee "equal resources for equal effort," the measure of effort must be revised to account for "municipal overburden."

The philosophy behind guaranteed tax base formulas is that local tax effort reflects a district's willingness to support education. Urban school districts in New Jersey, however, cannot maintain or increase their locally-raised revenues as readily as districts with growing tax bases and/or fewer non-educational demands. Some states, like Michigan, have adjusted their measures of effort to reflect these burdens. Another approach is to increase the level of non-educational aid to the state's "urban-aid" districts.

- State aid for students with special educational needs should reflect how that need is concentrated in districts, variations in the cost of providing these services, and districts' relative ability to raise additional funds.

The weightings in the school funding formula may reflect the statewide average cost for educating a mentally or physically handicapped pupil, but the weightings for bilingual and compensatory education programs have come under fire. The fall 1978 report of the Minimum Basic Skills Advisory Committee to the State Board of Education found, in addition to administrative problems in the state's remedial education programs, that districts have not adequately funded the state-mandated programs. The Committee recommended a review of the compensatory education funding formula and a revision to reflect actual costs and enrollment patterns.

In addition, concentrations of educationally disadvantaged and/or bilingual students require adjustments in regular classroom curricula. These costs are not considered now in calculating categorical aid.

- The state should develop a policy to deal with the fiscal and educational effects of declining enrollments.

Failure to close the gap in per-pupil expenditures is due in part to the uneven distribution of declining enrollments. While budget caps have kept the lid on increases in high-spending districts, they do not adjust budgets in light of declining enrollments. A policy must be developed that helps, rather than punishes, districts beset by this problem.

APPENDIX A

GLOSSARY

Budget Caps: Statutory limits on expenditure increases in local school budgets (Section 25 of the Public School Education Act of 1975). A district's expenditure level in any year is limited to a percentage growth over the prior year's budget, a growth rate affected by the state's rising property valuations and the district's relative expenditure level. Districts spending less than the state average net current expense budget may increase their spending at a rate greater than districts spending more than the state average.

Categorical Aid: State aid designated for specific use. Examples are transportation aid, special education aid, aid for vocational education, and aid for capital construction.

Current Expenditures: Current expenditures include educational expenditures for the daily operation of the school program. They do not include capital construction and debt service expenses.

District Plan: The district plan is determined by the grade levels a district offers and whether it is part of a regional district.

Equalized Property Valuation: The value of taxable property in a district adjusted by the New Jersey Division of Taxation to reflect 100 percent of market value.

Fiscal Neutrality: When a school finance system is "fiscally neutral," local district wealth does not determine how much money is available for education. Two districts levying the same property tax rate would receive identical per-pupil educational revenues.

Guaranteed Tax Base Formula: The Guaranteed Tax Base Plan is designed to assure that every district in the state can act as though it had a tax base at least as great as some set minimum. State aid is the difference between what would theoretically be raised under the guaranteed tax base and what can actually be raised from the local tax base. The greater the disparity between actual and guaranteed wealth, the larger the state aid allocation. The Guaranteed Tax Base formula is:

State Aid = (Revenues generated by the Guaranteed Tax Base) - (Revenues generated by the Actual Tax Base).

Leveling-up: The objective of "leveling up" education expenditures is to raise low-spending districts to the state average or median expenditure level. One is not concerned with expenditure disparities that exist above this level.

Minimum Support Aid: An amount of aid to which every district is entitled. In New Jersey, every district received a minimum equalization aid payment equal to 10 percent of its state support limit through 1978-79. As of July 1, 1979, minimum aid becomes related to the wealth of the district.

Municipal Overburden: A term often used to describe those school districts which, because of an unusually high level of non-educational service need, are unable to support as high a level of educational spending as their wealth might imply.

Net Current Expense Budget: A district's current expense budget minus federal aid, miscellaneous revenue, balance appropriated, and state categorical aid.

Operating Cost per Pupil: A district's current expense budget minus federal Elementary and Secondary Education Act aid and tuition expended per-pupil enrolled in the district's schools.

Pupils: The number of children who reside in the school district and are enrolled on September 30th in public schools either in their own district or in a district to which the school board pays tuition. This count does not include students sent to county vocational schools.

School Tax Rate: The amount of property tax dollars to be paid for each $100 of equalized valuation in a school district. School tax rates are calculated by dividing the revenues raised locally for education by the district's equalized property valuation.

State Support Limit: The 65th percentile net current expense budget when all districts within a given district plan are ranked from low to high. The state support limit is calculated and applied separately for the five district plans.

Wealth-equalization: The process of compensating for a school district's weaker ability to support education in order to achieve student equity and taxpayer equity.

Weighted Pupils: Weighted pupils represent the sum of the number of students residing in a district and the additional cost factors applied to students who have special educational needs.

APPENDIX B

METHODOLOGY

Chapter I -- Looking For Equity

Two basic methodologies were used to measure the extent of expenditure and revenue disparities among school districts in New Jersey: ranges and interval analysis. Ranges measured the relative and absolute differences between expenditures and tax rates at the 5th and 95th percentiles; these percentiles were drawn from frequency distributions of pupils, not districts. Thus five percent of the state's pupils had less than, or more than, X dollars spent on their education. Similarly, five percent of the pupils lived in districts levying tax rates above or below a certain level.

The intervals used in the analysis were developed in the following way. Districts were ranked from low to high on (1) equalized valuation per pupil and (2) weighted pupil index for each of the years considered. Each of the rankings was divided into seven intervals, each interval containing approximately one-seventh of the pupils in the state. The figures reported for each interval were weighted by the number of pupils in each district, or in the case of tax rates, by the size of the district's tax base.

Since local revenues are raised, and state aid is paid, according to where students reside, the analysis in this chapter used a resident pupil count as its base. Current expenditures in these districts were thus adjusted to exclude tuition received by the district to educate students living outside their boundaries. Revenues from the federal Elementary and Secondary Education Act have also been excluded as they are intended to supplement local and state efforts.

These analyses do not include county vocational school districts.

Chapter II -- Education Budget Caps

The impact of the education budget caps on district expenditures and tax rates is cumulative. Therefore the analysis reported in Chapter II used a "best case" model; it assumed that all districts spent up to their permitted budget caps in each of the three years.

Data on budget cap increases (percent of allowable growth) and cap waivers were drawn from the files of the Department of Education. County vocational districts are not included in this analysis. Some figures for 1976-77 were drawn from reports of the Monitoring Program 4--Budget Caps of the Joint Committee on the Public Schools, New Jersey Legislature.

Chapter III -- What Does The Money Buy?

Since this chapter discusses the provision of educational services to pupils, the units of analysis are the district which operates schools and the pupils enrolled in that district. Districts with only elementary or secondary programs were eliminated because their expenditure and staffing patterns can differ markedly from each other and from the K-12 districts.

In order to isolate districts that were affected by the changes in the state aid formula, we ranked districts from high to low on this variable: change in state aid for current expenditures from 1976-77 to 1978-79 as a percentage of that district's current expenditures in 1975. Nearly 30

percent, or 61 of the districts had a measure of 25 percent or greater. These 61 districts were used in analyzing the allocation of new state aid dollars between tax relief and increased expenditure. Since eight districts in this group reported their 1977-78 budgets in a program budget format, however, they had to be excluded when the analysis of expenditure patterns was conducted.

Any analysis of expenditure patterns must take place within the structure of education budgets in that state. In New Jersey, expenditures for food services, student body activities, community services and special projects; on federal programs; and for special schools are not contained within the traditional administrative, instructional, etc., accounts. Therefore the expenditures analyzed in Tables 12 and 14 do not include sundry accounts, or expenditures in the "federal" and "special schools" accounts.

When we examined the relationship between expenditures and the distribution of teachers and their characteristics, we included these accounts since we could not differentiate teachers supported by the "Instruction" budget from those funded by the "Federal" or "Special Schools" accounts. Since many districts did not report their revenues from the Elementary and Secondary Education Act in 1977-78, we had to exclude these dollars in order to make the analysis comparable across both years.

APPENDIX C

HOW THE NEW JERSEY STATE AID FORMULA OPERATES

State aid to education in New Jersey is distributed through four different formulas: (1) equalization aid; (2) transportation aid; (3) aid for students with special educational needs; and (4) debt service and capital outlay aid.

Equalization Aid

In 1978-79, approximately 70 percent of the state's aid for elementary and secondary education was distributed through an equalization aid formula. The formula, a Guaranteed Tax Base Plan, is designed to assure that every district in the state can act as though it had a tax base at least as great as some set minimum. State aid is the difference between what would theoretically be raised under the guaranteed tax base and what can actually be raised from the local tax base. The greater the disparity between actual and guaranteed wealth, the larger the state aid allocation. In New Jersey, the Guaranteed Tax Base formula has two components: (1) the state support ratio; and (2) the district's aidable expenditures.

The State Support Ratio. The state support ratio is the percentage of a district's expenditures which the state will support through the payment of equalization aid. For 1978-79, it was calculated as:

$$1 - \frac{\text{District Equalized Property Valuation per-pupil (1977)}}{\text{135\% State Average Property Valuation per-Pupil (1977)}}$$

In 1978-79, the Guaranteed Tax Base was 135 percent of $78,500, or $106,000 per pupil. In 1979-80 the Guaranteed Tax Base will be 1.344 of the 1978 state average valuation.

District's Aidable Expenditures. The state support ratio is applied to the district's Net Current Expense Budget (NCEB). This figure is the district's current expenditures minus federal aid, miscellaneous revenue, surpluses appropriated, and state categorical aid. The NCEB applied in the formula cannot exceed the 65th percentile NCEB for districts in its grade plan (State Support Limit).

Calculation of Equalization Aid. Table A-1 shows how aid is calculated for two districts of unequal wealth and equal per-pupil expenditures. Theoretically, through a combination of state aid and locally-raised revenues, each district is guaranteed the same level of aidable expenditures for equal tax rates.

The formula works in practice, however, only if current year, and not prior year, numbers are used in the formula. Districts X and Y receive state aid based on last year's budgets; yet the calculation of this year's locally-raised revenues and tax rates is based on current year figures. If per-pupil property valuations do not increase at the same rate in the two districts, the result will not be "equal revenues for equal effort" (see bottom of Table A-1).

Minimum Aid. In 1978-79, no district received less in equalization aid than an amount equal to 10 percent of its State Support Limit. In 1979-80, minimum aid will be distributed in inverse proportion to the district's wealth; districts with property valuations per-pupil exceeding 11.5 times the state average will receive no aid.

Transportation Aid. In 1978-79, districts were reimbursed 100 percent of their 1977-78 approved transportation expenditures. This payment represented about nine percent of state aid. For the 1979-80 school year, this level of reimbursement has been reduced to 90 percent.

Table A-1

The Calculation of Equalization Aid under the Public School Education Act of 1975, for 1978-79

	State Support Ratio (based on Prior Year valuations)	Aidable Expenditures (based on Prior Year	State Equalization Aid	Hypothetically: Locally-Raised Revenues	Hypothetically: Local Tax Rate (per hundred)
	1 - District Val. / GTB	NCEB per-pupil	State support ratio * NCEB	NCEB minus Equalization Aid	Locally Raised Revenues / District Valuation *100
District X	1 - 53,000 / 106,000 = 0.50	$ 1060	0.50 * 1060 = $530	$1060 - $530 = $530	$530 / 53,000 *100 = $1.00
District Y	1 - 79,500 / 106,000 = 0.25	$1060	0.25*1060 = $265	$1060 - $265 = $795	$795 / 79,500 *100 = $1.00

	Current Year Valuation	Current Year Expenditures	Current Year Locally-Raised Revenues	Current Year Local Tax Rate (per hundred)
District X (+ 8%)	$57,250	$1200	$1200 - $530 =$670	$670 / 57,250 *100 = $1.17
District Y (+ 15%)	$90,500	$1200	$1200 - $265 =$935	$935 / 90,500 *100 = $1.03

C-3

Special Needs Aid. Equalization aid is designed to cover general operating expenditures. Districts with students requiring extra educational services receive additional state monies to cover these extra costs. Each student requiring special services is "weighted" by the relative severity of his educational need. The weights, or additional cost factors, ranged from a high of 2.73 for visually handicapped students to a low of 0.09 for supplementary instruction in 1978-79. Special needs aid is equal to the number of units of additional cost in the district multiplied by the state average NCEB per pupil for the prior year. This aid, therefore, is distributed on a "per pupil" basis; it is not adjusted according to the relative wealth of the district.

Special needs aid covers students enrolled in 12 categories of special education classes, bilingual education programs, compensatory education programs, and local vocational education programs; students receiving supplementary instruction or home instruction; and students enrolled in approved private schools. In 1978-79, it represented about 16 percent of all state education aid.

Debt Service and Capital Outlay Aid. State aid for capital outlay and debt service is distributed through the same formula as general equalization aid. The district's state support ratio is applied to state-defined aidable expenditures for debt service and capital outlay. In the former case, aidable expenditures include those amounts for debt service to be raised by local taxation and state aid. In the latter case, aidable expenditures are limited to an amount equal to 1.5 percent of the sum of the current expenditure and capital outlay budgets for the prior year, minus revenues from sources other than local taxation and state aid. In 1978-79, these aids accounted for five percent of total state aid to education.

APPENDIX D

Relationship between Operating Cost per-Pupil, Teacher/Pupil Ratios, Teacher Experience and Teacher Salaries for all Elementary Districts, 1977-78

Operating Cost per-Pupil	Teachers per 1000 Pupils	Average Teacher Experience	Average Teacher Salary
Less than $ 1542	51.24	9.1	$ 13,524
$ 1543 - $ 1877	57.02	9.7	14,461
$ 1878 and over	61.71	10.9	15,632
State Average	56.72	9.9	14,556

Source: New Jersey State Department of Education and New Jersey Education Association data compiled and analyzed by Education Policy Research Institute, Educational Testing Service, Princeton, New Jersey.

APPENDIX E

Data Underlying Figures 1 and 2

Figure 1: Relationship between Property Wealth and Current Expenditures per Pupil, 1975-76 to 1978-79

Group*	Property Valuation per-Pupil as a % of State Average 1975-76	Current Expenditures per-Pupil 1975-76	Propery Valuation per-Pupil as a % of State Average 1977-78	Current Expenditures per-Pupil 1977-78	Property Valuation per-Pupil as a % of State Average 1978-79	Current Expenditures per-Pupil 1978-79
1 (lowest wealth)	0.36%	$1504	0.34%	$1791	0.32%	$1994
2	0.58	1414	0.55	1719	0.52	1933
3	0.77	1411	0.76	1782	0.75	1978
4	0.94	1460	0.94	1812	0.92	1994
5	1.09	1604	1.09	2012	1.08	2200
6	1.24	1689	1.26	2046	1.26	2268
7 (highest wealth)	1.93	1752	1.99	2178	2.01	2390
	Average	1550		1908		2113

*Each Group contains approximately the same number of pupils

Figure 2: Relationship between Distribution of Teachers and Current Expenditures per-Pupil, 1975-76 and 1977-78

Districts Grouped by Current Expenditures per-Pupil	Teachers per 1000 Pupils, 1975-76	Teachers per 1000 Pupils, 1977-78
1 (lowest spending)	47.6	51.5
2	51.2	54.4
3	53.2	55.9
4	54.5	58.7
5	55.2	58.7
6	56.3	59.6
7 (highest spending)	60.8	64.0
Average	54.2	57.4

Source: New Jersey State Department of Education data compiled and analyzed by the Education Policy Research Institute, Educational Testing Service, Princeton, New Jersey.